

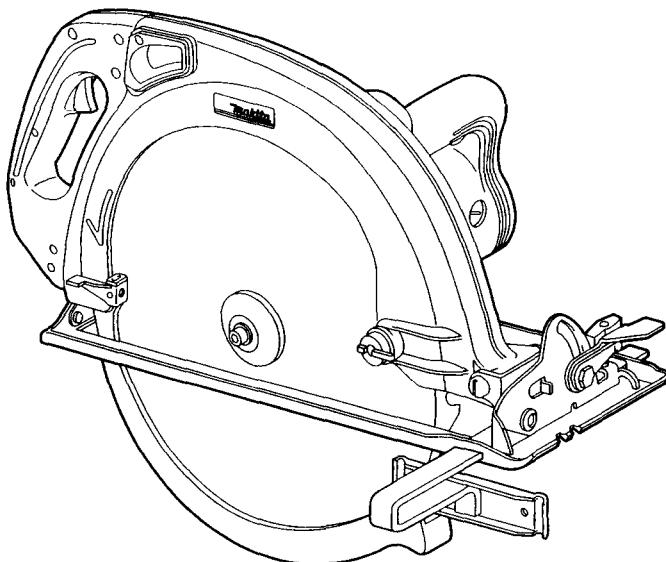


マキタ

# Circular Saw

**415 mm (16-5/16") MODEL 5402NA**  
Equipped with Electric Blade Brake

## INSTRUCTION MANUAL



### SPECIFICATIONS

Blade diameter	Max. cutting capacities		No load speed (RPM)	Overall length	Net weight
	at 90°	at 45°			
415 mm (16-5/16")	158 mm (6-3/16")	106 mm (4-3/16")	2,200/min.	616 mm (24-1/4")	13.0 Kg (28.7lbs)

• Manufacturer reserves the right to change specifications without notice.

\* Note: Specifications may differ from country to country.

WARNING: For your personal safety, READ and UNDERSTAND before using.

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

# **GENERAL SAFETY RULES**

## **(For All Tools)**

USA001-1

**WARNING!** Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and/or serious personal injury.

## **SAVE THESE INSTRUCTIONS**

### **Work Area**

- 1. Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- 2. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
- 3. Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

### **Electrical Safety**

- 4. Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances.** Never remove the grounding prong or modify the plug in any way. Do not use any adaptor plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- 5. Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
- 6. Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- 7. Do not abuse the cord.** Never use the cord to carry the tools or pull the plug from an outlet. Keep cord away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately. Damaged cords increase the risk of electric shock.
- 8. When operating a power tool outside, use an outdoor extension cord marked "W-A" or "W."** These cords are rated for outdoor use and reduce the risk of electric shock.

### **Personal Safety**

- 9. Stay alert, watch what you are doing and use common sense when operating a power tool.** Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

- 10. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- 11. Avoid accidental starting. Be sure switch is off before plugging in.** Carrying tools with your finger on the switch or plugging in tools that have the switch on invites accidents.
- 12. Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- 13. Do not overreach.** Keep proper footing and balance at all times. Proper footing and balance enables better control of the tool in unexpected situations.
- 14. Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

#### **Tool Use and Care**

- 15. Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
- 16. Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
- 17. Do not use tool if switch does not turn it on or off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- 18. Disconnect the plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- 19. Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- 20. Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools, with sharp cutting edges are less likely to bind and are easier to control.
- 21. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tools operation.** If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
- 22. Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool, may become hazardous when used on another tool.

#### **Service**

- 23. Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
- 24. When servicing a tool, use only identical replacement parts.** Follow instructions in the Maintenance section of this manual. Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.

## **Specific Safety Rules**

USB044-1

- 1. DANGER! Keep hands away from cutting area and blade. Keep your second hand on auxiliary handle or motor housing.** If both hands are holding the saw, they cannot be cut by the blade.  
**Keep your body positioned to either side of the saw blade, but not in line with the saw blade.** KICKBACK could cause the saw to jump backwards. (See "Causes and Operator Prevention of Kickback")  
**Do not reach underneath the work.** The guard can not protect you from the blade below the work. Don't attempt to remove cut material when blade is moving.  
**CAUTION:** Blades coast after turn off.
- 2. Check lower guard for proper closing before each use. Do not operate saw if lower guard does not move freely and close instantly.** Never clamp or tie the lower guard into the open position. If saw is accidentally dropped, lower guard may be bent. Raise the lower guard with the Retracting Handle and make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.
- 3. Check the operation and condition of the lower guard spring.** If the guard and the spring are not operating properly, they must be serviced before use. Lower guard may operate sluggishly due to damaged parts, gummy deposits, or a buildup of debris.
- 4. Lower guard should be retracted manually only for special cuts such as "Pocket Cuts" and "Compound Cuts."** Raise lower guard by Retracting Handle. As soon as blade enters the material, lower guard must be released. For all other sawing, the lower guard should operate automatically.
- 5. Always observe that the lower guard is covering the blade before placing saw down on bench or floor.** An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.
- 6. NEVER hold piece being cut in your hands or across your leg.** It is important to support the work properly to minimize body exposure, blade binding, or loss of control.
- 7. Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will also make exposed metal parts of the tool "live" and shock the operator.
- 8. When ripping always use a rip fence or straight edge guide.** This improves the accuracy of cut and reduces the chance for blade binding.
- 9. Always use blades with correct size and shape (diamond vs. round) arbor holes.** Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.
- 10. Never use damaged or incorrect blade washers or bolts.** The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.

## **11. Causes and Operator Prevention of Kickback:**

*Kickback is a sudden reaction to a pinched, bound, or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator.*

*When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator.*

*If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.*

*Kickback is the result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:*

## **12. Maintain a firm grip with both hands on the saw and position your body and arm to allow you to resist KICKBACK forces. KICKBACK forces can be controlled by the operator, if proper precautions are taken.**

## **13. When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or KICKBACK may occur. Investigate and take corrective actions to eliminate the cause of blade binding.**

## **14. When restarting a saw in the workpiece, center the saw blade in the kerf and check that saw teeth are not engaged into the material. If saw blade is binding, it may walk up or KICKBACK from the workpiece as the saw is restarted.**

## **15. Support large panels to minimize the risk of blade pinching and KICKBACK.**

Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel as shown in Fig. 1.

To minimize the risk of blade pinching and kickback. When cutting operation requires the resting of the saw on the workpiece, the saw shall be rested on the larger portion and the smaller piece cut off.

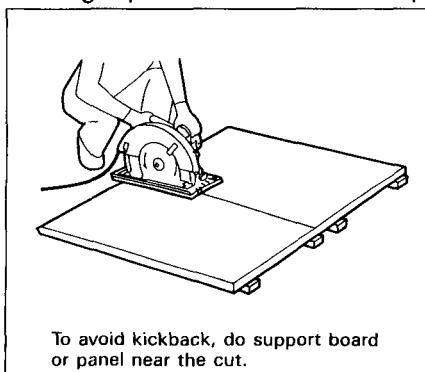


Fig. 1

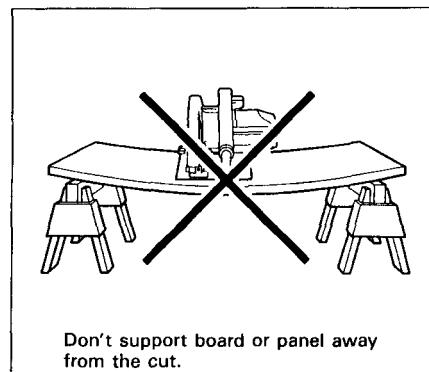


Fig. 2

16. **Do not use dull or damaged blade.** Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and KICKBACK.
17. **Blade depth and bevel adjusting locking levers must be tight and secure before making cut.** If blade adjustment shifts while cutting, it will cause binding and KICKBACK.
18. **Use extra caution when making a "Pocket Cut" into existing walls or other blind areas.** The protruding blade may cut objects that can cause KICKBACK.  
**NEVER place your hand or fingers behind the saw.** If kickback occurs, the saw could easily jump backwards over your hand, possibly causing severe injury.

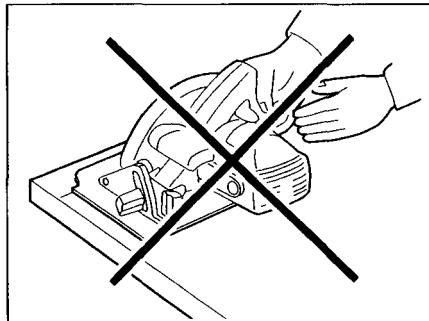
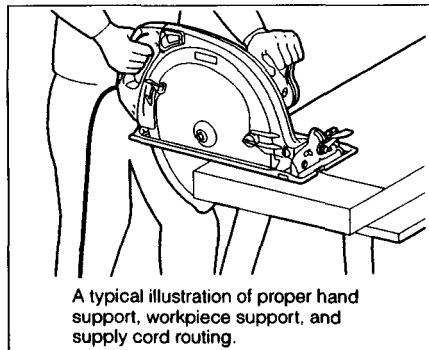


Fig. 3

19. **Adjustments.** Before cutting be sure depth and bevel adjustments are tight.
20. **Avoid Cutting Nails.** Inspect for and remove all nails from lumber before cutting.
21. When operating the saw, keep the cord away from the cutting area and position it so that it will not be caught on the workpiece during the cutting operation.  
Operate with proper hand support, proper workpiece support, and supply cord routing away from the work area.



A typical illustration of proper hand support, workpiece support, and supply cord routing.

Fig. 4

#### **WARNING:**

It is important to support the workpiece properly and to hold the saw firmly to prevent loss of control which could cause personal injury. Fig. 4 illustrates typical hand support of the saw.

22. Place the wider portion of the saw base on that part of the workpiece which is solidly supported, not on the section that will fall off when the cut is made. As examples, Fig. 5 illustrates the RIGHT way to cut off the end of a board, and Fig. 6 the WRONG way. If the workpiece is short or small, clamp it down. **DON'T TRY TO HOLD SHORT PLACES BY HAND!**

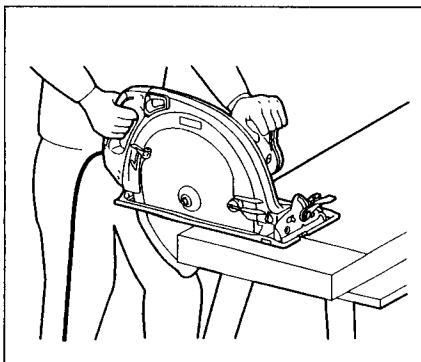


Fig. 5

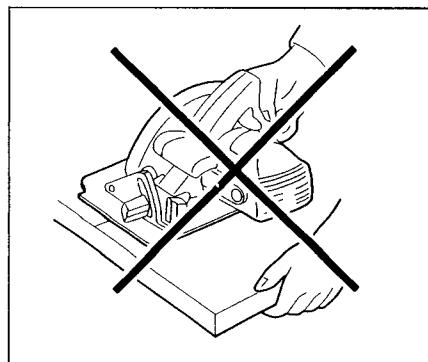


Fig. 6

23. Never attempt to saw with the circular saw held upside down in a vise. This is extremely dangerous and can lead to serious accidents.

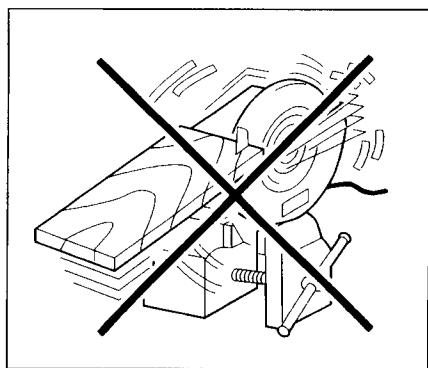


Fig. 7

24. Before setting the tool down after completing a cut, be sure that the lower (telescoping) guard has closed and the blade has come to a complete stop.

## SAVE THESE INSTRUCTIONS.

## SYMBOLS

The followings show the symbols used for tool.

V ..... volts

A ..... amperes

Hz ..... herts

~ ..... alternating current

n<sub>o</sub> ..... no load speed

.../min ..... revolutions or reciprocation per minute

## FUNCTIONAL DESCRIPTION

### CAUTION:

Always be sure that the tool is switched off and unplugged before any adjustment is attempted.

### Adjusting depth of cut

Loosen the lever on the depth guide and move the base up or down.

At the desired depth of cut, secure the base by tightening the lever.

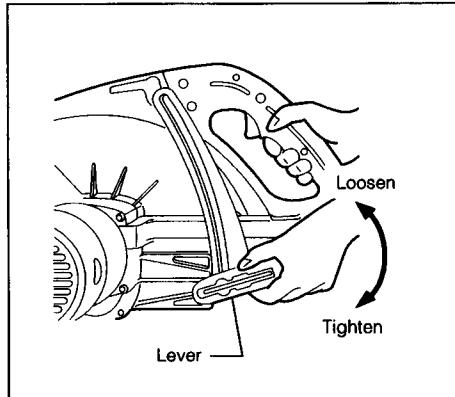


Fig. 8

### CAUTION

- Use a shallow depth of cut when cutting thin workpiece for cleaner, safer cuts.
- After adjusting the depth of cut, always tighten the lever securely.

### Bevel cutting

Loosen the lever on the bevel scale plate on the front of the base and the clamp screw on the back.

Set for the desired angle (0 – 45°) by tilting accordingly, then tighten the lever and the clamp screw securely.

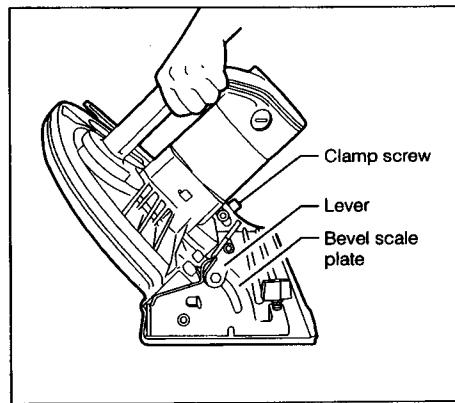


Fig. 9

## Adjusting for accuracy of 90° cut (vertical cut)

This adjustment has been made at the factory. But if it is off, adjust the adjusting screw with the hex wrench while squaring the blade with the base using a triangular rule or try square, etc.

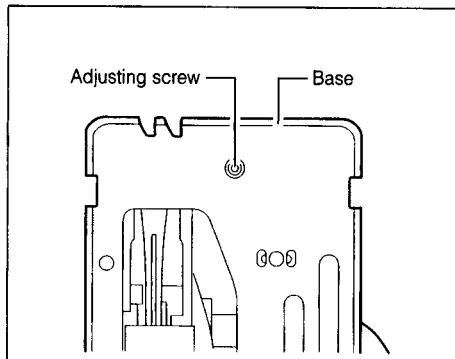


Fig. 10

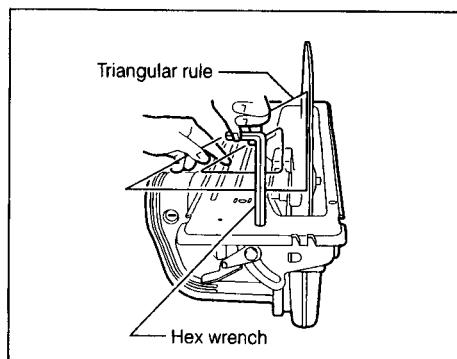


Fig. 11

### CAUTION

After adjusting the depth of cut and bevel cutting angle, be sure to tighten the screw.

### Blade steady device

In general way, use the lock lever by setting it in locked position.

To lock the lock lever, push it down and turn it 90° counterclockwise. To release the lock lever, turn it 90° clockwise. When you replace a saw blade, release the lock lever.

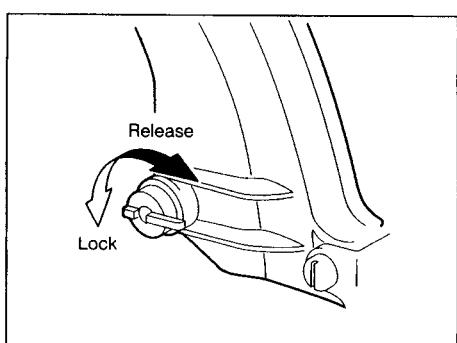


Fig. 12

### Sighting

For straight cuts, align the right notch on the front of the base with your cutting line on the workpiece.

For 45° bevel cuts, align the left notch with it.

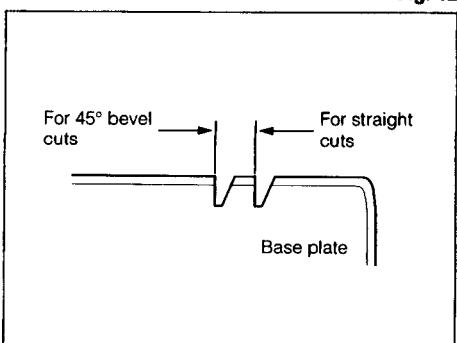


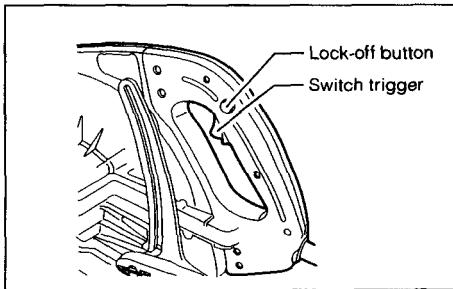
Fig. 13

## **Switch action**

### **CAUTION:**

Before plugging into the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

To prevent the switch trigger from being accidentally pulled, a lock-off button is provided. To start the tool, depress the lock-off button and pull the switch trigger. Release the switch trigger to stop.



**Fig. 14**

## **ASSEMBLY**

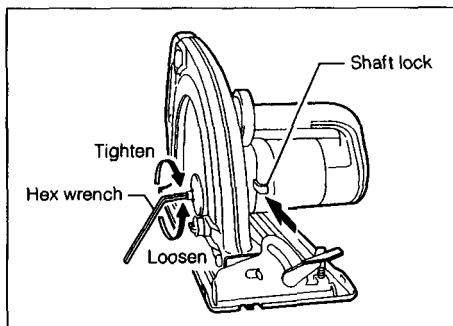
### **Removing or installing saw blade**

### **CAUTION:**

Always be sure that the tool is switched off and unplugged before removing or installing the blade.

Release the lock lever of blade steady device.

To remove the blade, press the shaft lock so that the blade cannot revolve and use the hex wrench to loosen the hex bolt counterclockwise. Then remove the hex socket head bolt, outer flange and blade.

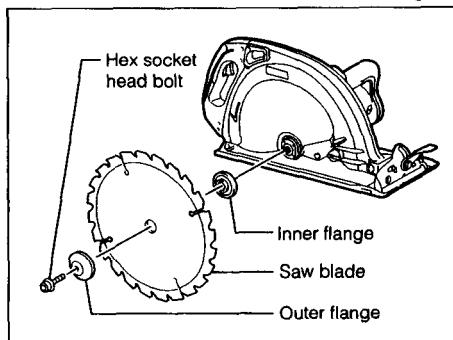


**Fig. 15**

To install the blade, follow the removal procedure in reverse.

**BE SURE TO TIGHTEN THE HEX SOCKET HEAD BOLT SECURELY.**

After installing the blade, lock the lock lever.



**Fig. 16**

## CAUTION:

- Be sure the blade is installed with teeth pointing up at the front of the tool.
  - Use only the Makita hex wrench to install or remove the blade.
  - The inner flange has a 25 mm (63/64") diameter on one side and a 25.4 mm (1") diameter on the other. The side with 25.4 mm (1") diameter is marked by "25.4".
- Use the correct side for the hole diameter of the blade you intend to use. Mounting the blade on the wrong side can result in dangerous vibration.

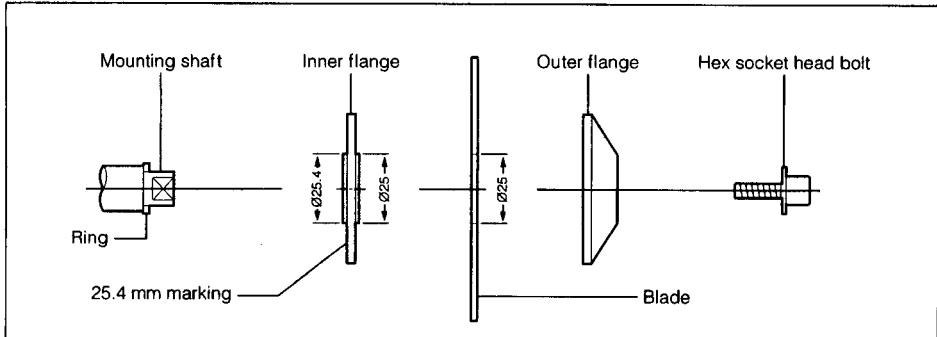


Fig. 17

## Hex wrench storage

The hex wrench can be conveniently stored in the lever.

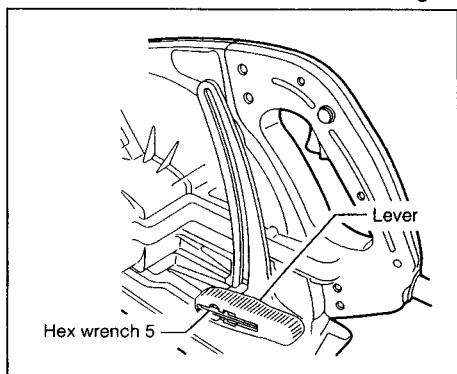


Fig. 18

To remove the hex wrench, push the shorter side of it out with your finger.

Then remove the hex wrench.

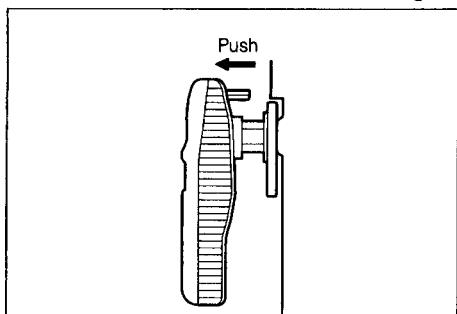


Fig. 19

To store the hex wrench, insert the longer side of it into the lever.  
Then push the shorter side of it down.

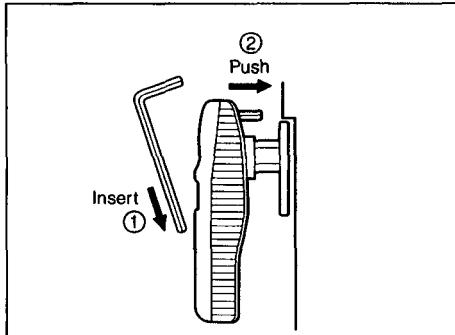


Fig. 20

## OPERATION

Grasp the rear handle with your right hand, the front grip with your left. Set the base plate on the workpiece to be cut without the blade making any contact. Then turn the tool on and wait until the blade attains full speed. Now simply move the tool forward over the workpiece surface, keeping it flat and advancing smoothly until the sawing is completed. To get clean cuts, keep your sawing line straight and your speed advance uniform.

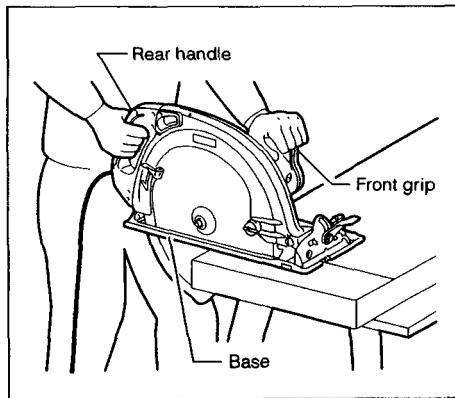


Fig. 21

### CAUTION:

Grasp the rear handle and the front grip firmly when starting or stopping the tool, since there is an initial and final reaction.

### Rip fence (guide rule)

The handy rip fence (guide rule) allows you to do extra-accurate straight cuts. Simply slide the rip fence up snugly against the side of the workpiece and secure it in position with the clamp screw on the front of the base. It also makes repeated cuts of uniform width possible.

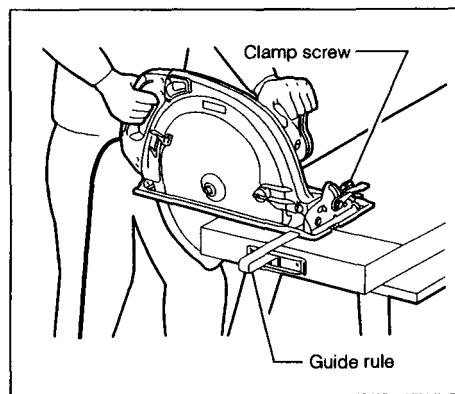


Fig. 22

## MAINTENANCE

### CAUTION:

Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.

#### Replacing carbon brushes

Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

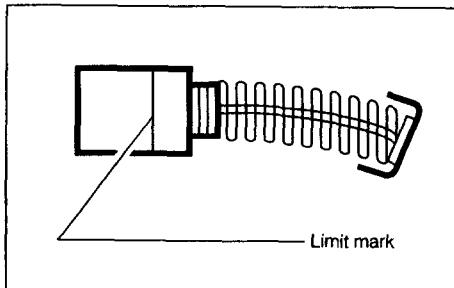


Fig. 23

Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps.

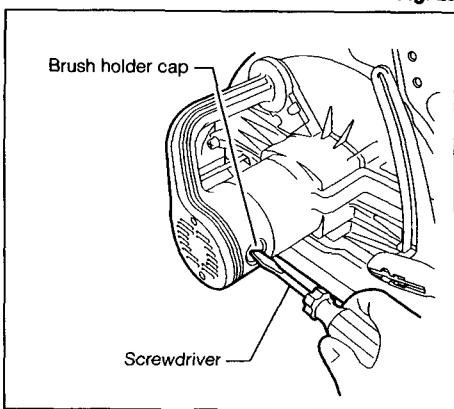


Fig. 24

To maintain product SAFETY and RELIABILITY, repairs, maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

## ACCESSORIES

### CAUTION:

These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. The accessories or attachments should be used only in the proper and intended manner.

#### • Tungsten carbide-tipped saw blade

For wood

Part No.	Diameter (mm)	Hole diameter (mm)	No. teeth
721704-8	415 (16-5/16")	25 (63/64")	60
A-90956	415 (16-5/16")	25 (63/64")	32

#### • Chisel tooth combination saw blade

For rip and cross cut work

Part No.	Diameter (mm)	Hole diameter (mm)	No. teeth
721703-0	415 (16-5/16")	25 (63/64")	50

#### • Cross cut saw blade

For smoother cross-grain cuts

Part No.	Diameter (mm)	Hole diameter (mm)	No. teeth
721702-2	415 (16-5/16")	25 (63/64")	100

#### • Rip saw blade

For faster cutting with grain.

Part No.	Diameter (mm)	Hole diameter (mm)	No. teeth
721701-4	415 (16-5/16")	25 (63/64")	70

#### • Guide rule

Part No. 164019-4



#### • Hex wrench

Part No. 783203-8



# WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints,
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

## MAKITA LIMITED ONE YEAR WARRANTY

### Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one-year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others;
- repairs are required because of normal wear and tear;
- The tool has been abused, misused or improperly maintained;
- alterations have been made to the tool.

**IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.**

**MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.**

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

**Makita Corporation**

3-11-8, Sumiyoshi-cho,  
Anjo, Aichi 446-8502 Japan

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